

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-12 (Canceled) Claims 1-12 were previously canceled.

13. (Currently Amended) A polishing apparatus for polishing a film of an object having a substrate, an insulating film formed over the substrate, interconnection grooves formed in the insulating film, and said film formed inside said grooves and above said insulating film, ~~an object having a film on a surface to be polished,~~

comprising a processing solution supplying means for supplying a processing solution over the surface to be polished at least substantially parallel to that surface and

removing by polishing the projecting portions of film formed outside of the interconnection grooves by a shear stress due to the application of the processing solution. ~~film formed outside of the interconnection grooves by a shear stress due to the processing solution preferentially from projecting portions of said film to flatten the surface.~~

14. (Original) A polishing apparatus as set forth in claim 13, which polishes an object wherein the film comprises a copper film.

15. (Original) A polishing apparatus as set forth in claim 13, which supplies a processing solution containing at least a chelating agent from said processing solution supplying means.

16. (Original) A polishing apparatus as set forth in claim 15, which supplies a processing solution further containing an oxidizing agent from said processing solution supplying means.

17. (Original) A polishing apparatus as set forth in claim 15, which supplies a processing solution further containing a surface-active agent from said processing solution supplying means.

18. (Currently Amended) A polishing apparatus for ~~an object having a film on a surface to be polished, comprising~~ polishing a film of an object having a substrate, insulating film formed over the substrate, interconnection grooves formed in the insulating film, and said film located inside said grooves and above said insulating film,

a cathode member arranged facing said ~~surface~~ film;

an electrolytic solution supplying means for supplying an electrolytic solution between said ~~surface~~ film and said cathode member and over said ~~surface~~ film at least substantially parallel to said ~~surface~~ film; and

a power supply for supplying voltage with said cathode member as a cathode and said film as an anode and

removing by polishing ~~preferentially projecting portions of the film by the shear stress of the processing solution.~~ the projecting portions of film formed outside of the

interconnection grooves by a shear stress due to the application of the processing solution.

19. (Original) A polishing apparatus as set forth in claim 18, which polishes an object wherein the film comprises a copper film.

20. (Original) A polishing apparatus as set forth in claim 18, which supplies an electrolytic solution containing at least a chelating agent from an electrolytic solution supplying means.

21. (Original) A polishing apparatus as set forth in claim 20, which supplies an electrolytic solution further containing a surface-active agent from said processing solution supplying means.

22. (Original) A polishing apparatus as set forth in claim 20, wherein said power supply is a direct current power supply which supplies a predetermined voltage with said cathode member as a cathode and said film as an anode.

23. (Original) A polishing apparatus as set forth in claim 21, wherein said power supply is a direct current power supply which supplies a predetermined voltage with said cathode member as a cathode and said film as an anode.

24. (Original) A polishing apparatus as set forth in claim 22, wherein said direct current power supply supplies a pulse-like voltage having a predetermined period.

25. (Original) A polishing apparatus as set forth in claim 23, wherein said direct current power supply supplies a pulse-like voltage having a predetermined period.

26. (Currently Amended) A polishing apparatus as set forth in claim 20, wherein said apparatus further comprises an anode member facing said ~~surface~~ film to be polished and separated from said cathode member by a predetermined distance;

said electrolytic solution supplying means supplies an electrolytic solution between said ~~surface~~ film

and said cathode member and between said ~~surface~~ film and said anode member; and

said power supply supplies voltage to said cathode member and said anode member.

27. (Currently Amended) A polishing apparatus as set forth in claim 21, wherein

said apparatus further comprises an anode member facing said ~~surface~~ film to be polished and separated from said cathode member by a predetermined distance;

said electrolytic solution supplying means supplies an electrolytic solution between said ~~surface~~ film and said cathode member and between said ~~surface~~ film and said

anode member; and

said power supply supplies voltage to said cathode member and said
anode member.

28. (Original) A polishing apparatus as set forth in claim 26, wherein said anode member is comprised of a nobler metal than the material of said film.

29. (Original) A polishing apparatus as set forth in claim 27, wherein said anode member is comprised of a nobler metal than the material of said film.

30. (Original) A polishing apparatus as set forth in claim 20, further comprising an ammeter for measuring the value of a current flowing between said cathode member and said film.

31. (Original) A polishing apparatus as set forth in claim 21, further comprising an ammeter for measuring the value of a current flowing between said cathode member and said film.

32. (Original) A polishing apparatus as set forth in claim 30, further comprising a controller for controlling the voltage supplied by said power supply so that the current value obtained from said ammeter becomes constant.

33. (Original) A polishing apparatus as set forth in claim 31, further comprising a controller for controlling the voltage supplied by said power supply so that the current value obtained from said ammeter becomes constant.

34. (Original) A polishing apparatus as set forth in claim 30, which manages progress of polishing of said film by a direct current value obtained from said ammeter.

35. (Original) A polishing apparatus as set forth in claim 31, which manages progress of polishing of said film by a direct current value obtained from said ammeter.